

Claims

We claim:

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1. A computer-implemented method for providing clearinghouse services to a client device in an Internet Protocol (IP) telephony system, comprising the steps of:

10 transmitting a call set-up request for a call communication to a proxy server from a client application operating on the client device, the call set-up request comprising a called number for the call communication and user authentication information, the client device and the proxy server coupled to an IP network;

15 if the client application is a valid user of the services maintained at the proxy server, then transmitting an authorization request from the proxy server to a clearinghouse service running on a service point coupled to the IP network, the authorization request comprising the called number and a call identifier;

20 if the proxy server is a valid user of the clearinghouse services, then transmitting an authorization response from the service point to the proxy server via the IP network, the authorization response comprising the identity of one or more terminating gateways coupled to the IP network and available to deliver the call communication and an authorization token for each identified terminating gateway;

25 selecting one of the terminating gateways to deliver the call communication and transmitting via the proxy server a call communication set-up request to the selected terminating gateway via the IP network, the set-up request comprising the called number, the call identifier, and the authorization token; and

30 if the proxy server is a valid user of the call delivery services of the selected terminating gateway, then delivering the call communication via the selected terminating gateway to the Public Switched Telephone Network (PSTN).

2. A computer-implemented method for providing clearinghouse services to a client device in an Internet Protocol (IP) telephony system, comprising the steps of:

- 5 transmitting an authorization request for a call communication to a clearinghouse service operating on a service point from a client application operating on the client device, the authorization request comprising a called number for the call communication and a call identifier, the client device and the service point coupled to an IP network;
- 10 if the client application is a valid user of the clearinghouse, then transmitting an authorization response from the service point to the client application via the IP network, the authorization response comprising the identity of one or more terminating gateways coupled to the IP network and available to deliver the call communication and an authorization token for each identified terminating gateway;
- 15 selecting one of the terminating gateways to deliver the call communication and transmitting via the client application a call communication set-up request to the selected terminating gateway via the IP network, the set-up request comprising the called number, the call identifier, and the authorization token; and
- 20 if the client application is a valid user of the call delivery services of the selected terminating gateway, then delivering the call communication via the selected terminating gateway to the Public Switched Telephone Network (PSTN).

3. A computer-implemented method for providing clearinghouse services to a client device in an Internet Protocol (IP) telephony system, comprising the steps of:

- 5 transmitting a call set-up request for a call communication to a proxy server from the client device, the call set-up request comprising a called number for the call communication and user authentication information, the client device and the proxy server coupled to an IP network;
- 10 if the client application is a valid user of the services maintained at the proxy server, then transmitting an authorization request from the proxy server to a clearinghouse service running on a service point coupled to the IP network, the authorization request comprising the called number and a call identifier;
- 15 if the proxy server is a valid user of the clearinghouse services, then transmitting an authorization response from the service point to the proxy server via the IP network, the authorization response comprising the identity of one or more terminating gateways coupled to the IP network and available to deliver the call communication and an authorization token for each identified terminating gateway;
- 20 launching a client application at the client device and routing the identity of each terminating gateway and each authorization token from the proxy server to the client application;
- 25 selecting one of the terminating gateways to deliver the call communication and transmitting via the client application a call communication set-up request to the selected terminating gateway via the IP network, the set-up request comprising the called number, the call identifier, and the authorization token; and
- if the client application is a valid user of the call delivery services of the selected terminating gateway, then delivering the call communication via the selected terminating gateway to the Public Switched Telephone Network (PSTN).